

Legal framework and Practical implementation of Sustainable Forest Management in France

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With helpful support of:

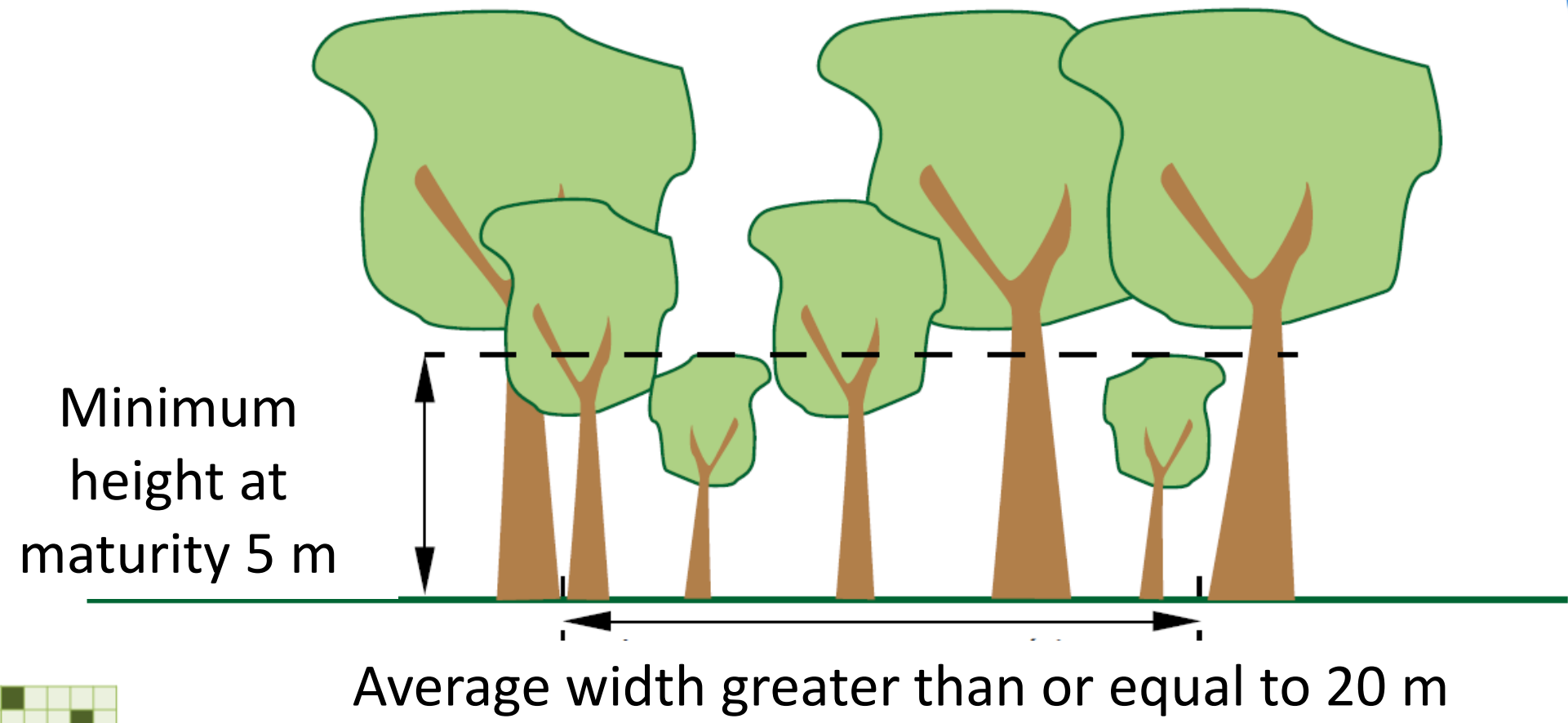
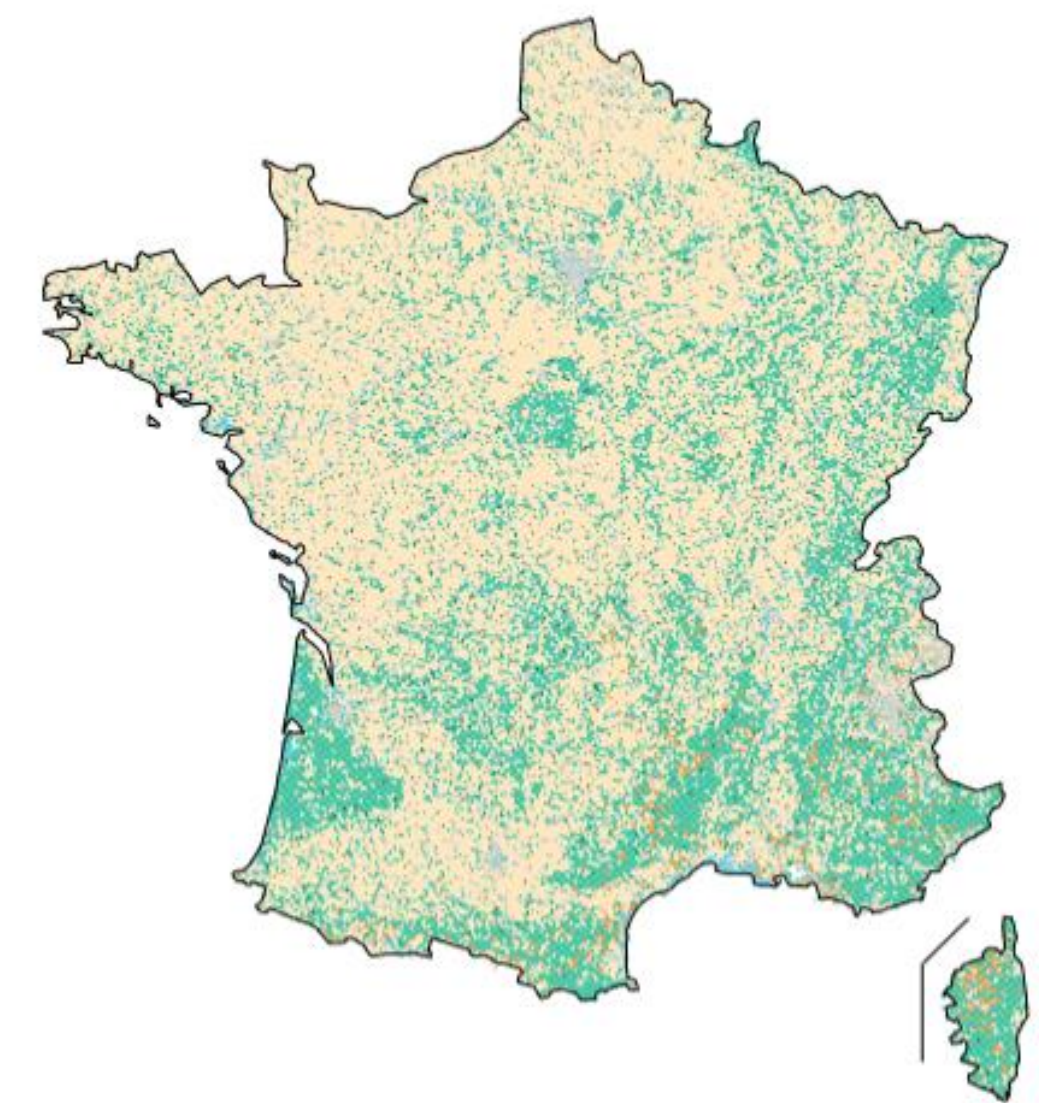
Laurent LARRIEU (INRAE/CNPF), Pierre MOSSANT (CEN Auvergne) and Céline

EMBERGER (CEN Occitanie)

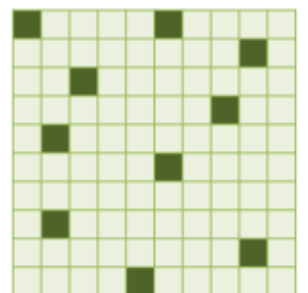
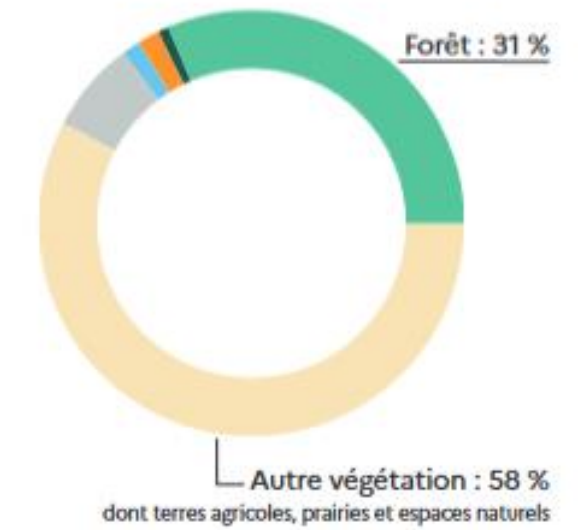


What is the definition of a forest in France?

Surface area over 50 ares
 More than 10% wooded cover
 Neither agricultural nor urban use

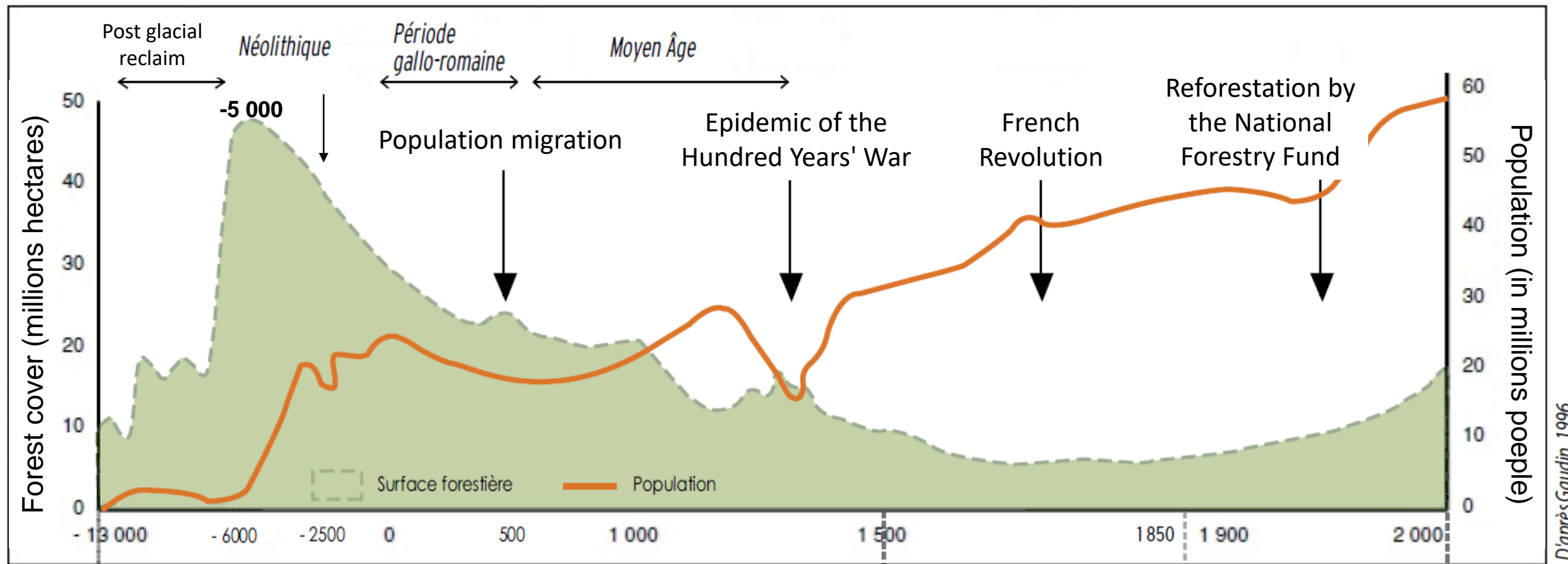


- Forest
 - Forêt 31%
 - Bosquet <1%
 - Landes 2%
- Others veg.
 - Sans végétation 7%
 - Autre végétation 58%
- Water
 - Eau continentale 1%



FOREST COVER = 31 % - 17.3 million hectares

An expanding forest since the mid-19th century !

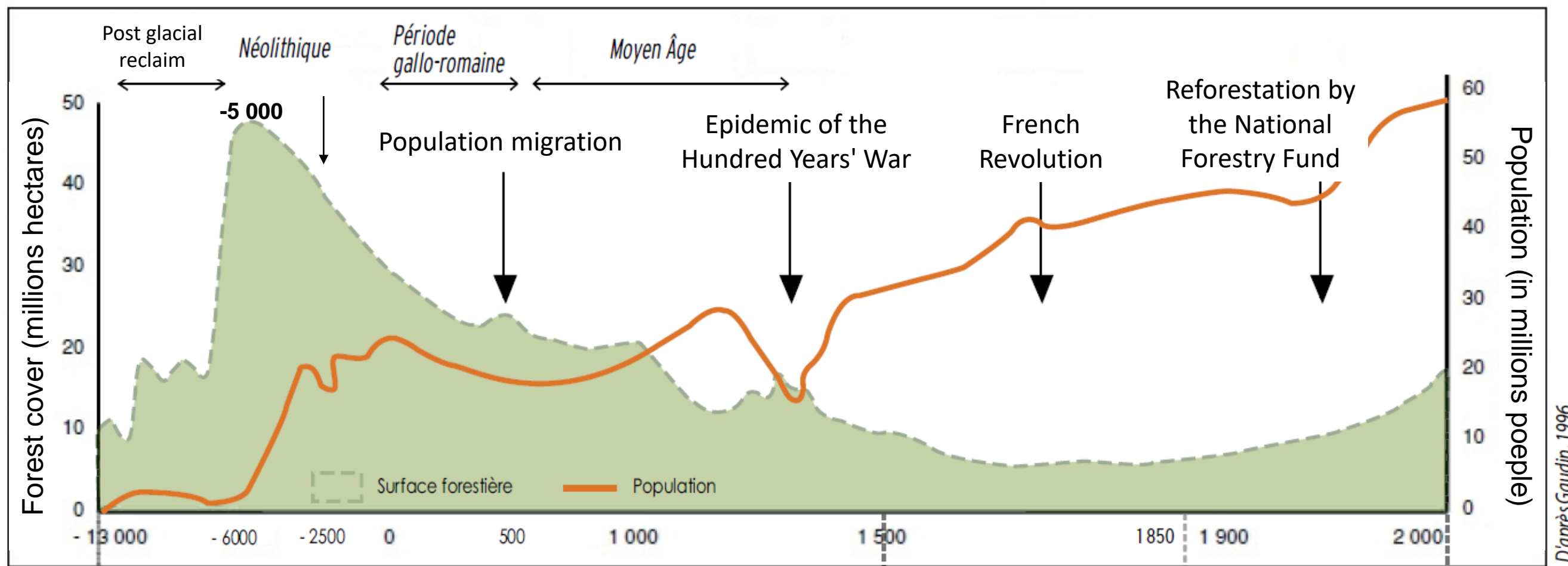


Cassini's map from 1756-1815 period

Forest cover was only **13 %** in the middle of 19th century

Only 30 % of current forest can be considered as
« Ancient Forest »

An expanding forest since the mid-19th century !



Etat Major map from 1820-1866 period

Forest cover was only **13 %** in the middle of 19th century

Only 30 % of current forest can be considered as
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But only few remnant of both Ancient and Mature Forest (AMF)

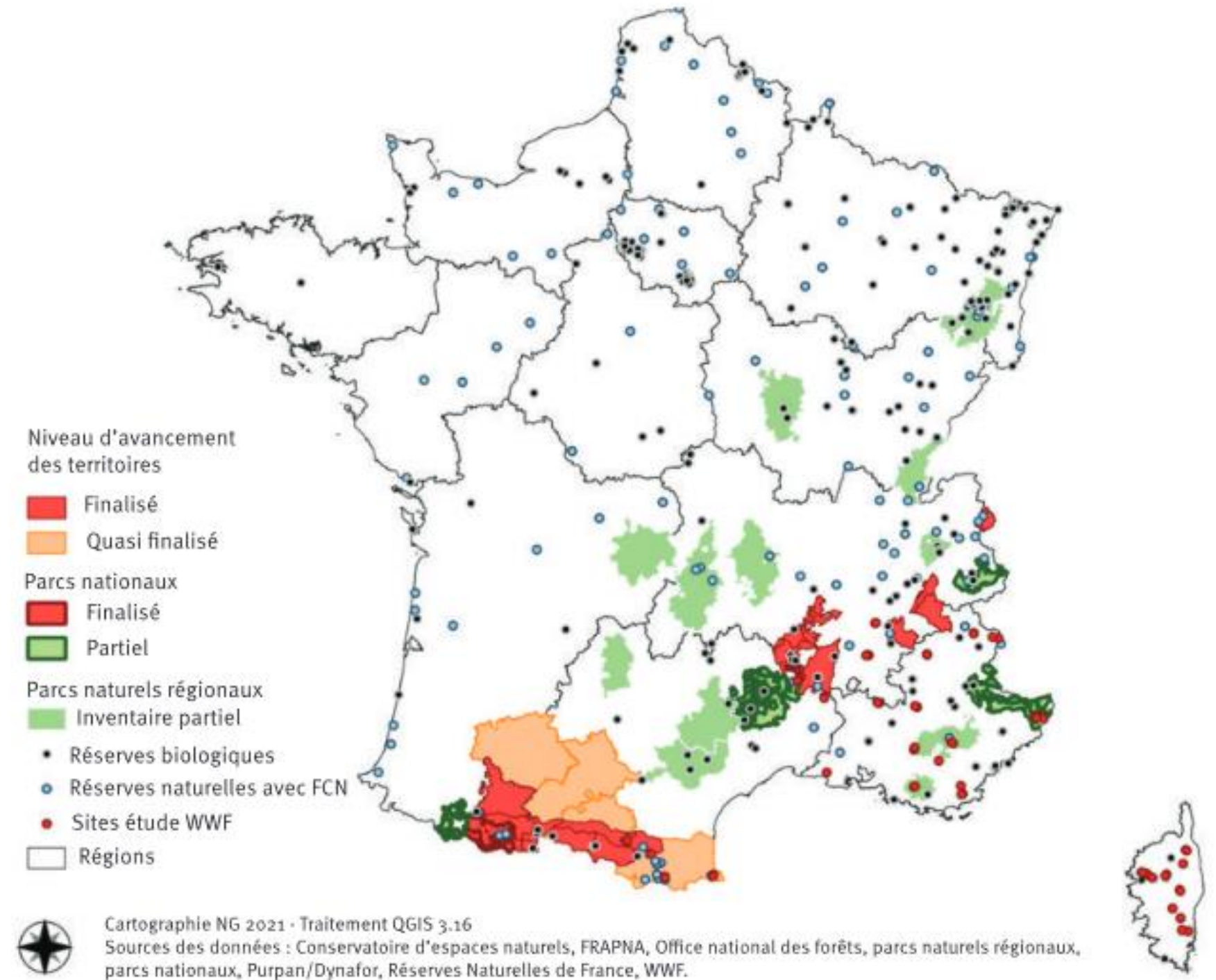
Less than 4% of forest cover in Alpine Biogeographic area
Less than 1 % of forest cover in lowland area

Only **0.24%** of forests in metropolitan France are guaranteed to **evolve freely** over the long term by a specific regulation (Debaive et al., 2022).

Data from the Special issue of the “revue forestière française” dedicated to free forest evolution in 2022



FIGURE 2 Map of old-growth forest study areas in France in 2021 (Savoie et al. 2022)



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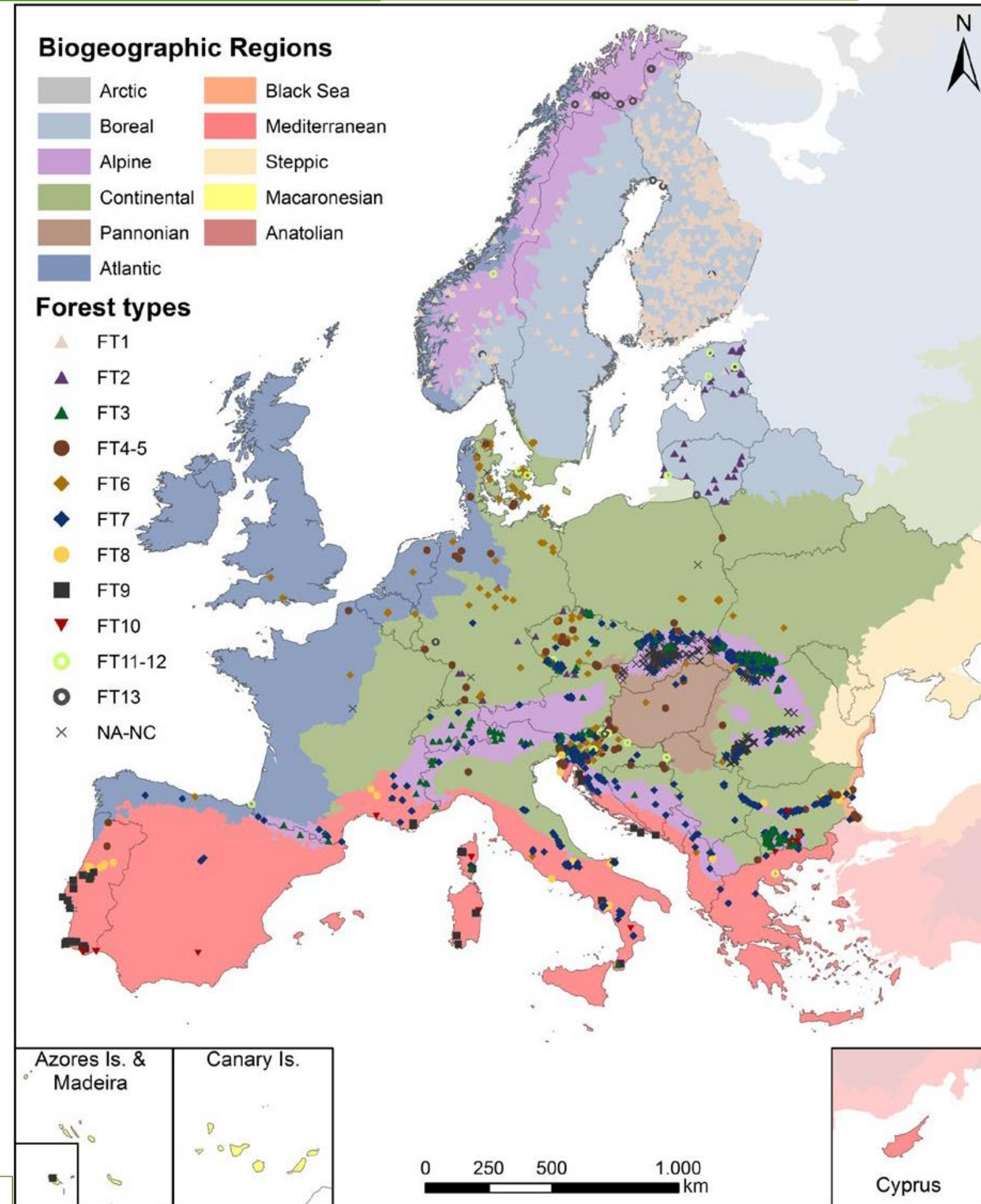
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Distribution of primary forest patches retrieved for Europe by forest type.



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Less than 4% of forest cover in Alpine Biogeographic area
Less than 1 % of forest cover in lowland area

An example with the AMF inventory of Occitanie:

Are considered as AMF all forest with:

- More than **10 very large living trees** /ha (dbh>70 cm)
- More than **10 large dead trees** / ha (dbh>40 cm)
 - No recent exploitation
- **Ancientness** (present in Etat major's Map)



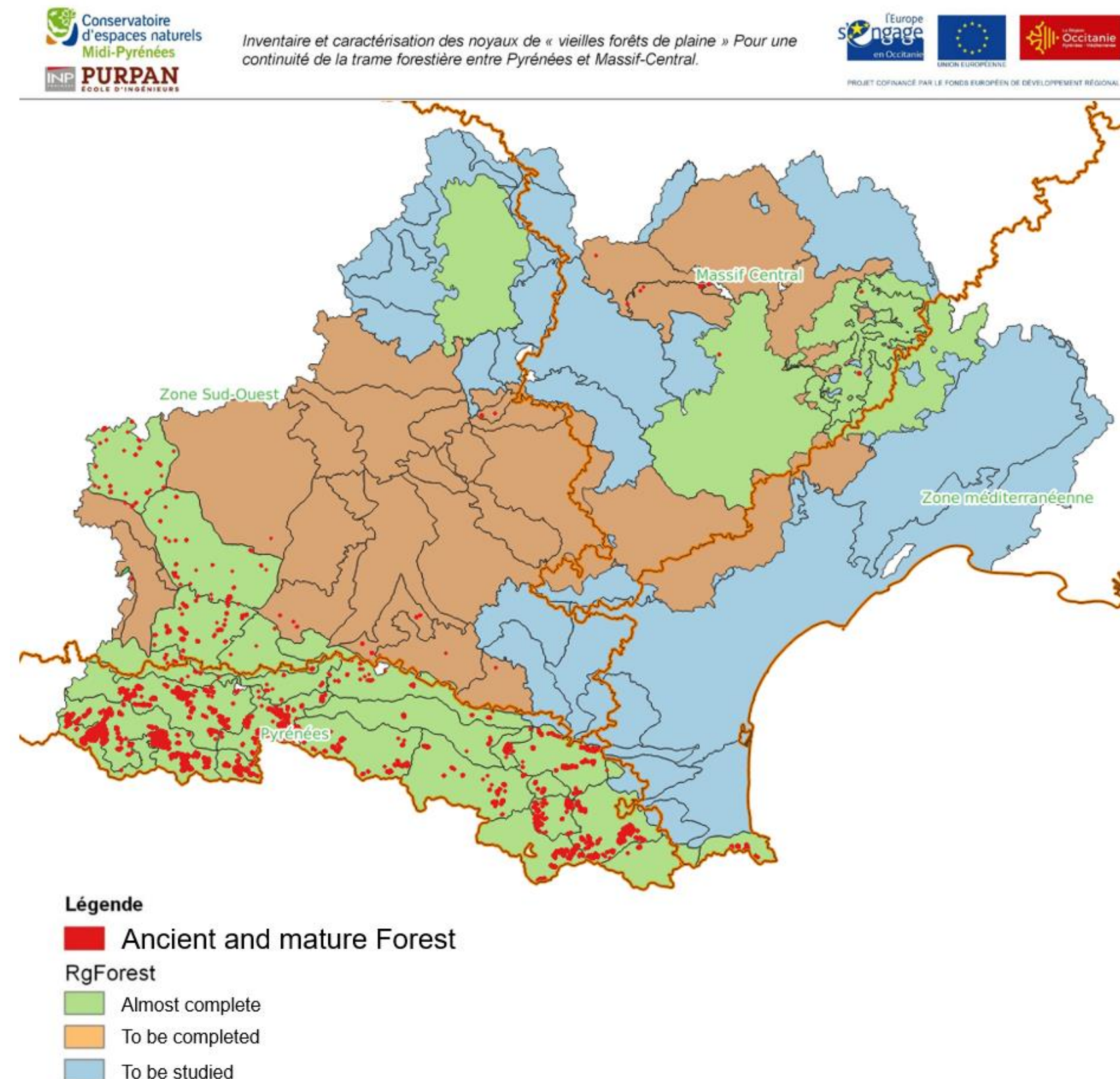
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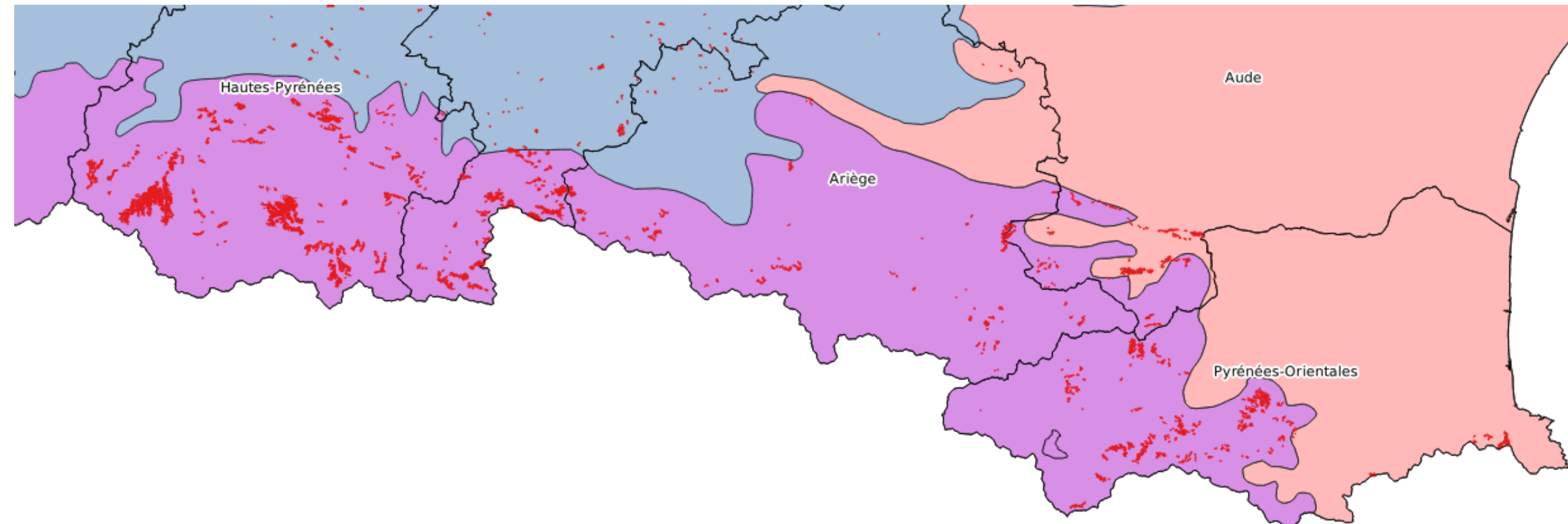
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Département	65	31	09	11	66	TOTAL
AMF Surface	3739,9	3019,9	1120,5	1437,7	2595,9	11913
% of forest cover	4,7	7,5	0,7	3,3	3,1	4,6

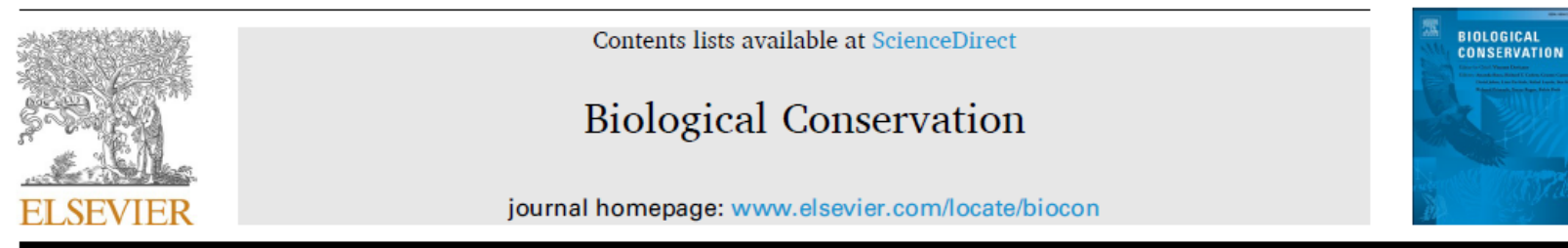
An example with the AMF inventory of Occitanie:

A non homogeneous covering at pyrenean scale



But only few remnant of of both Ancient and Mature Forest (AMF)

Biological Conservation 279 (2023) 109954



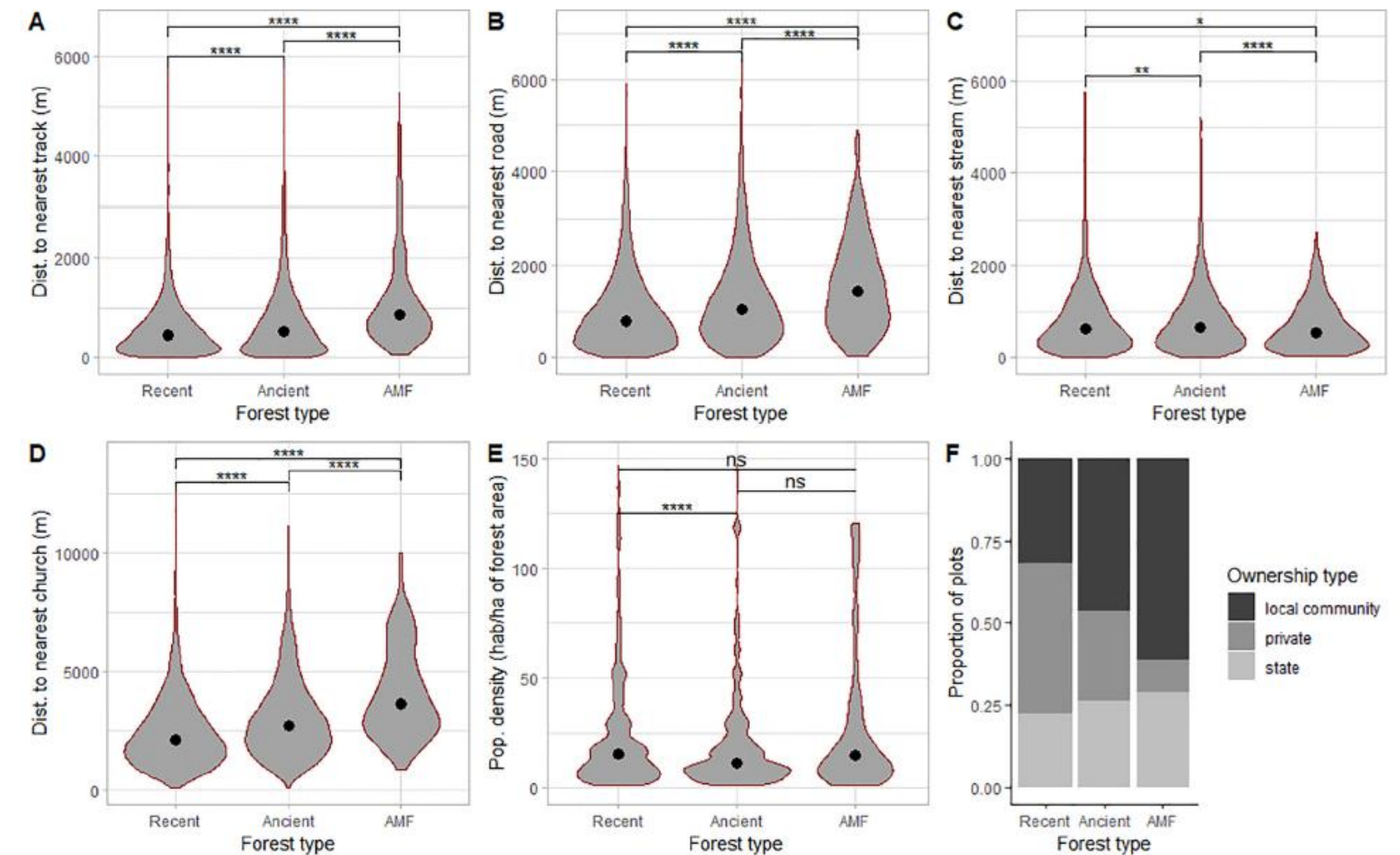
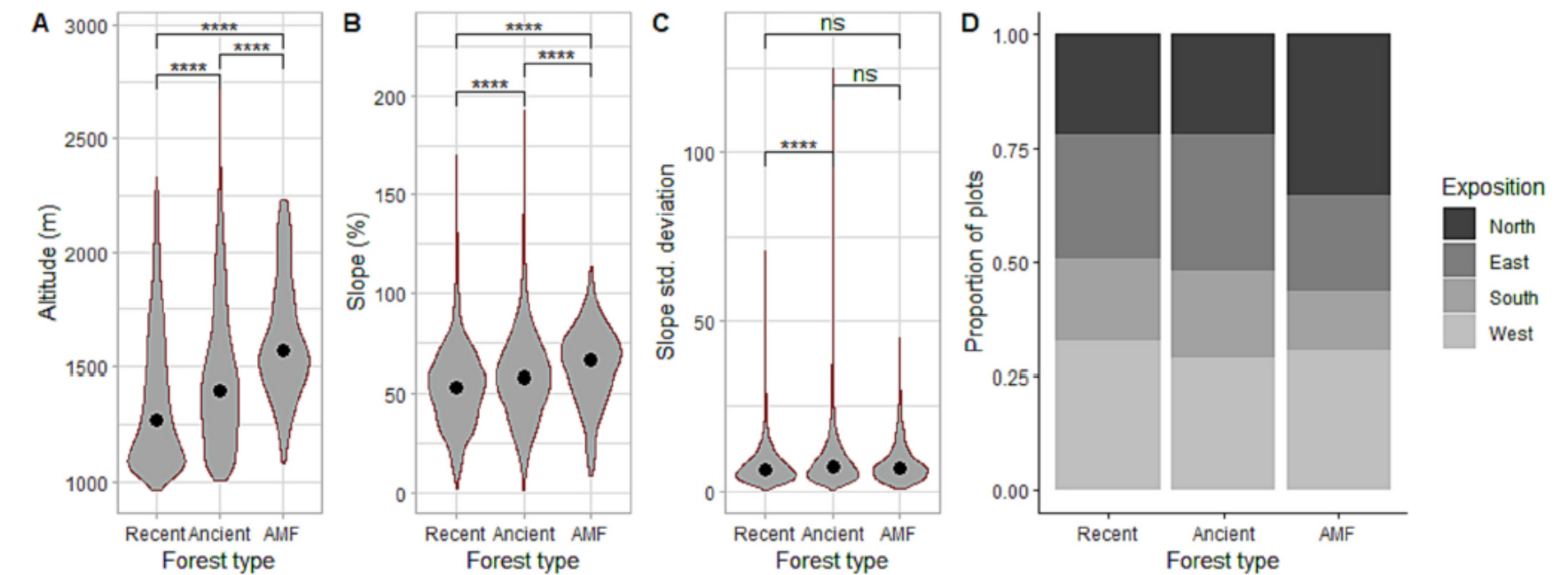
Are the remnants of old-growth mountain forests always relevant to inspire close-to-nature forest management and efficient biodiversity conservation?

Laurent Larrieu^{a,b,*}, Sylvain Burri^c, Gilles Corriol^d, Nicolas Goux^e, Sylvie Ladet^a, Fabien Laroche^a, Sophie Maillé^f, Vanessa Py-Saragaglia^g, Jean-Marie Savoie^h, Antoine Brin^h



An exploration of contextual data like Sabatini 2018 at Pyrenean scale.

Recent Forest
VS
Ancient Forest
VS
Ancient and Mature Forest



But only few remnant of of both Ancient and Mature Forest (AMF)

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As expected, **high elevation, steep and north-facing slopes** are significant environmental features that explain the **occurrence of AMFs** in mountain areas. However, **ownership type** is the most influential feature and a large part of variance in AMF occurrence seems to be explained by historical issues.



Py Vanessa et al. 2024

But only few remnant of of both Ancient and Mature Forest (AMF)

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An example with AMF inventory of Occitanie:



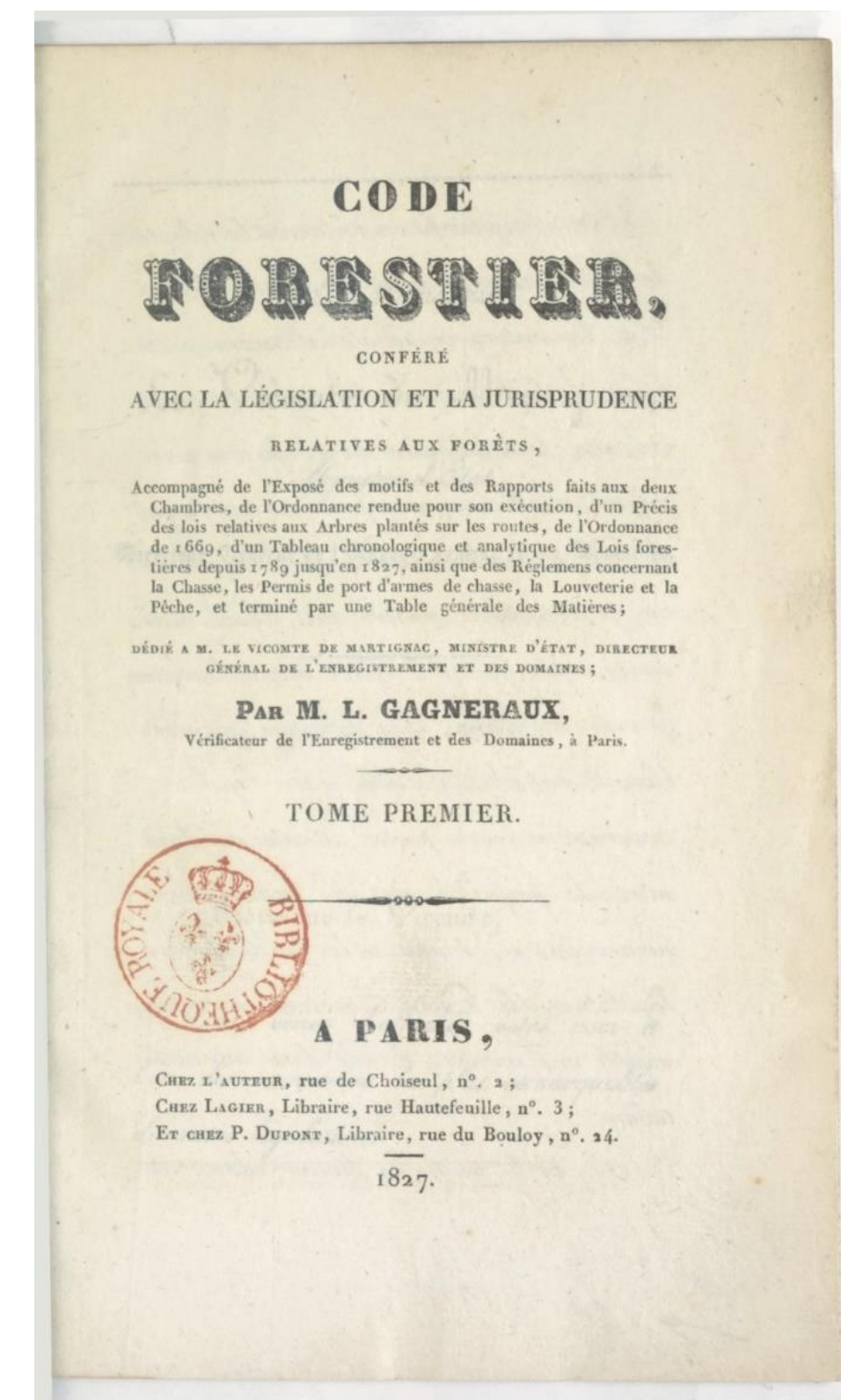
≈ 90% of them are not intended for timber harvesting in mountain area for public forest (ONF data)

10% remaining mainly public are planned to be harvest with cableways for Pyrenees

What legal framework for forests in France?

The French legal framework has been set by the Forestry Code since 1827.

At the same period, in 1861, Barbizon painters, against timber harvesting in Fontainebleau forest, created a 1,000-hectare artistic reserve. It was the first natural area in the world with a nature conservation measure.



What legal framework for forests in France?

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The **national forest and wood program** (PNFB), introduced by the Law on the Future of Agriculture, Food and Forestry of October 13, 2014, sets the guidelines for forestry policy, in public and private forests, in mainland France and overseas, for a ten-year period



**MINISTÈRE
DE L'AGRICULTURE
ET DE LA SOUVERAINETÉ
ALIMENTAIRE**

*Liberté
Égalité
Fraternité*



What legal framework for forests in France?

PUBLIC FOREST

« Domaniale » Forest
French state property

Other public forest
Municipality or other local authority
ownership

PRIVATE FOREST

Managed by:



National Forestry Office

Under the dual supervision of the

- Ministry of Agriculture and Food Sovereignty
- Ministry of Ecology, Energy, Sustainable Development and Town and Country Planning

Managed by private owner / private forestry manager / sworn forestry expert

Under the control of national authorities and CNPF



National Center of Forest Ownership

Under the supervision of the
Ministry of Agriculture and
Food Sovereignty following
CNPF objectives and
performance contract

Controlled by National policy service in territories (DDT)

Ownership characteristics of forest Alpine Biogeographic Region of France?

PUBLIC FOREST

« Domaniale » Forest
French state property

Other public forest
Municipality or other local authority ownership

≈ 15 %

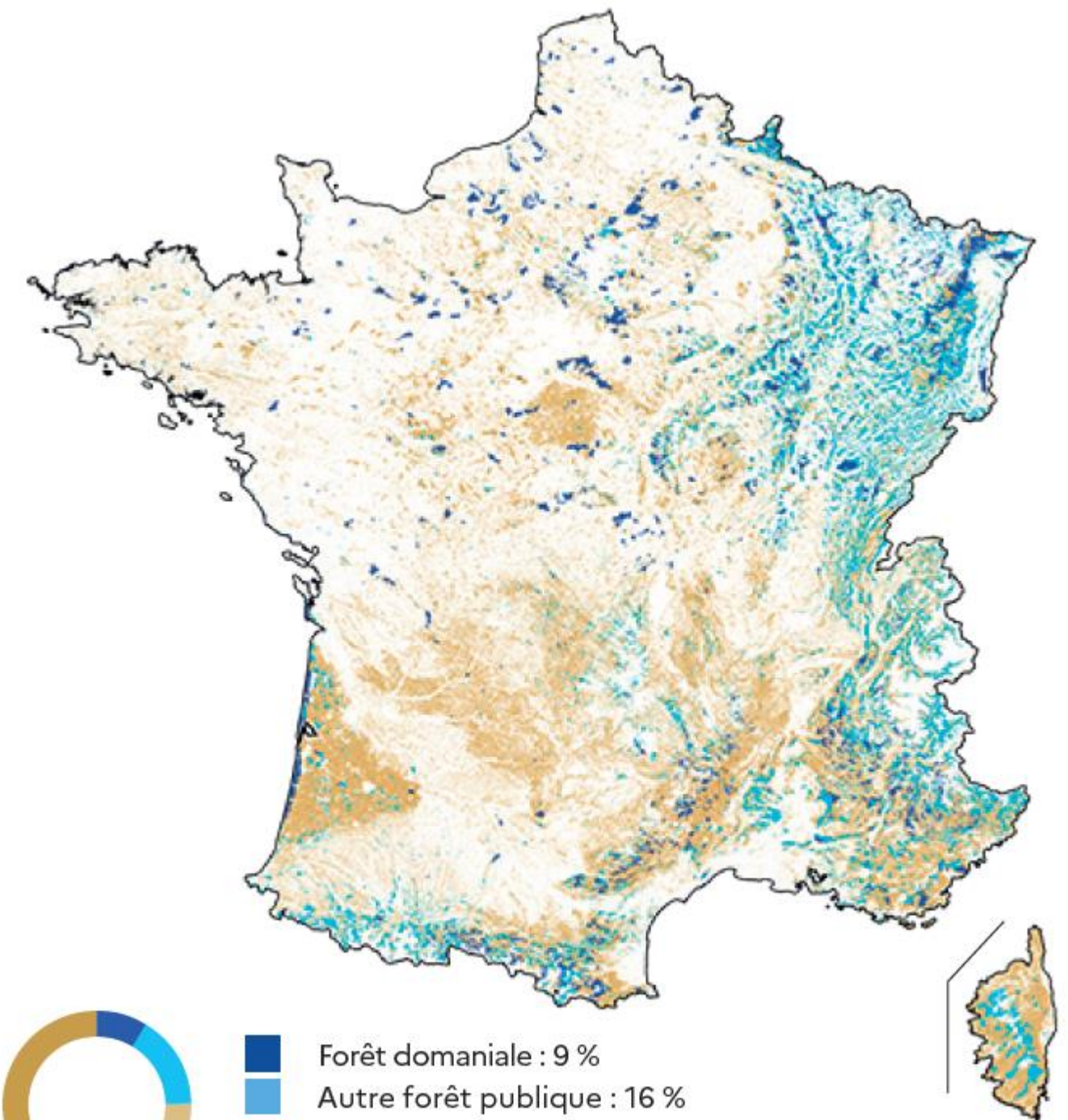
≈ 30 %

PRIVATE FOREST

≈ 55 % (75 % in France)

With 5% under management plan PSG -> Mandatory for forests of more than 20 hectares

RÉPARTITION DE LA PROPRIÉTÉ FORESTIÈRE



Major points for biodiversity conservation in French forests in the legal framework :

IN PUBLIC FOREST



INSTRUCTION

N° INS-18-T-97

le 27 décembre 2018

Diffusion interne : T

Diffusion externe : MAA, MTES, FNCOFOR

Service rédacteur : DFRN

Direction générale
2, av. de Saint-Mandé
75570 Paris Cedex 12

Objet : Conservation de la biodiversité dans la gestion courante des forêts publiques

Mots-clés : biodiversité – politique environnementale – gestion forestière durable – PEFC – FSC – aménagement

Processus principal impacté : Mettre en œuvre les aménagements - SAM

Autre(s) processus concerné(s) : Définir et mettre en œuvre la stratégie - STR

Elaborer les aménagements - EAM

Commercialiser les bois - BOI

Réaliser des travaux - TRA

- Developing a network of biological reserves
(Currently around 250 reserves, covering more than 54,000 hectares)
- Developing a network of old-trees with:
 - Islands of mature wood (at least 3 % of forest cover)
 - Preserve habitat and dead trees (at least 3 trees / ha)
- Taking into account remarkable species with specific management if it necessary

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ONLY RECOMMENDED FOR Municipality or other local authority ownership -> depending on local willingness !

Major points for biodiversity conservation in French forests in the legal framework :

IN PRIVATE FOREST

Following the national forest and wood program (PNFB) interpreted at regional scale in the **Regional forestry management scheme**



Major points for biodiversity conservation in French forests in the legal framework :

IN PRIVATE FOREST

A BIG ISSUE FOR A COMMON FRAMEWORK !

Example with the case of **interruption of timber harvesting = FREE EVOLUTION** for preservation and restoration of old growth forest in the alpine biogeographic area:

- For Auvergne-Rhone-Alpes, the Regional forestry management scheme indicate for private owner:

*A few parcels voluntarily left untouched and under conservation management may also be included, up to a **limit of 10% of the surface area of the wooded property**, taking into account parcels already technically classified as untouched.*

- For Occitanie, the Regional forestry management scheme indicate for private owner:

Should certain forest owners wish to include in their management document a voluntary choice not to they will have to demonstrate to the Centre Councilthat the management proposal meets the conditions for sustainable, multifunctional forest management

The presence of remarkable habitats or species associated with a certain maturity of the forests, the implementation of scientific systems for monitoring ecosystem evolution, a fortiori their integration into a network, the absence of other strong issues on the plots in question, are among the arguments that can help to justify such a choice.

Authorized under condition but not recommended with strong ambition !

Other frameworks promoting sustainable forest management:

Official certification



Other network



.....

Need to progress toward **Integrated Forest Management** to an ambitious integration of nature conservation objectives into Sustainable Forest Management (SFM)



Promoting the integration of nature conservation into sustainable forest management at the policy, practice and research level



Different kinds of Sustainable Forest Management (SFM) framework with different level of integration of biodiversity

France still not a member despite some researcher widely involved in the process and a marteloscope network

Current Objectives of national strategy for forest biodiversity conservation :

- **10% of the national territory, land and sea, under “strong” protection**
- **Ensuring long-term support for forest renewal diversified and resilient with main objectives of planting 1 billions of trees**
- **Developing *Payments for Ecosystem Services (PES)* forestry**
- **Publish a national action plan for *old-growth and subnatural forests* with objective to **protected strictly 100 % of them****
- **Encourage use of the *Index of Biodiversity Potential (IBP)***

All these objectives are financed by annual call for proposals



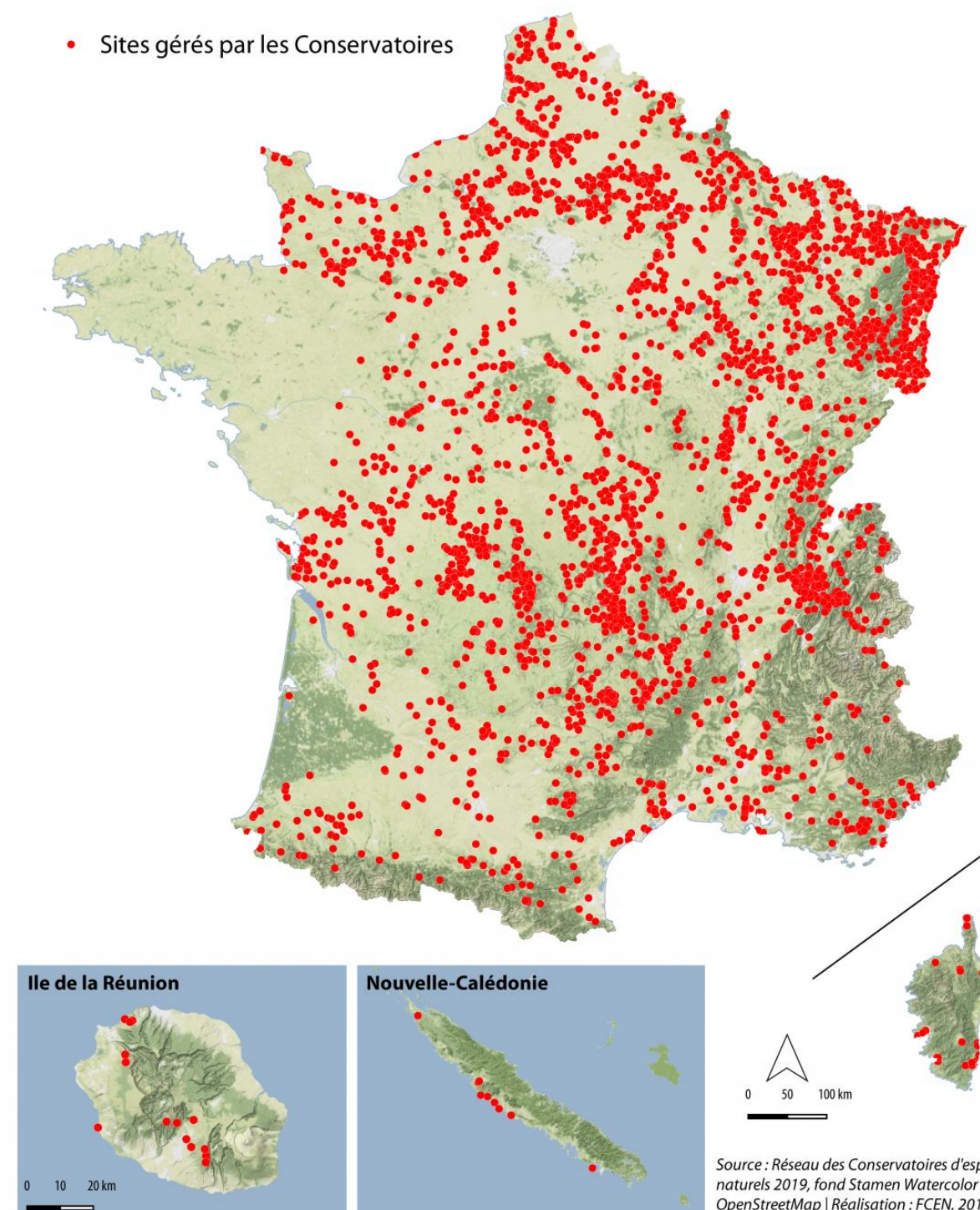
Which levers for forest preservation, the role of NGO:

Acquisition, the most effective solution for the preservation of old growth forest on the long term

Example of « Conservatoires d'espaces naturels »

4,100 natural sites covering 300,000 ha, including 18,000 ha owned
Managers of 112 nature reserves
One of the principal Natura 2000 operators in France

Forest Cover of sites managed by CENs > 50 %
(Cf. *BD Forêt*®)



Source : Réseau des Conservatoires d'espaces naturels 2019, fond Stamen Watercolor / données OpenStreetMap | Réalisation : FCEN, 2019-07

Which levers for forest preservation, the role of NGO:

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Example of « Conservatoires d'espaces naturels »

With:

Sylvae: a network of old-growth forests in free evolution

≈ **950 ha currently owned by CENs** for the preservation and restauration of old growth forest

One of the biggest network of old growth forest preserve by a private ownership after national public forest (biological reserve in public forest managed by ONF)

The possibility of inalienability thanks to the foundation of natural area



Réseau
de vieilles forêts
des Conservatoires d'espaces naturels



Fondation
Espaces naturels
de France

Other levers for forest preservation, the role of NGO:

Acquisition, the most effective solution for the preservation of old growth forest on the long term

Example of « Conservatoires d'espaces naturels »

With financial support of public and private funding



... de *fonds privés* ...



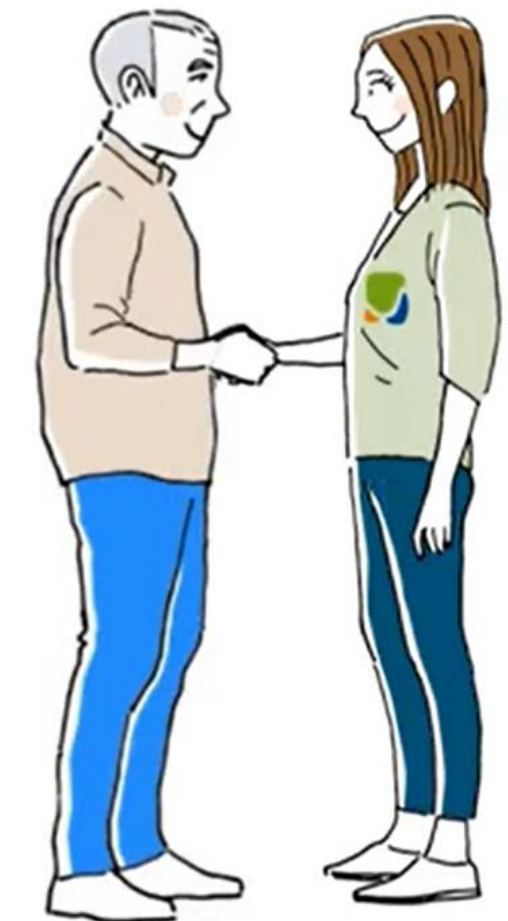
Which levers for forest preservation, the role of NGO:

ORE, the most effective solution for the preservation of forest biodiversity on the long term

The « **real environmental obligation** » (ORE) is a **contract** between a property owner and an environmental protection association signed by notary deed.

In the event of sale, the contract continues.

The contract duration can be set at 99 years.



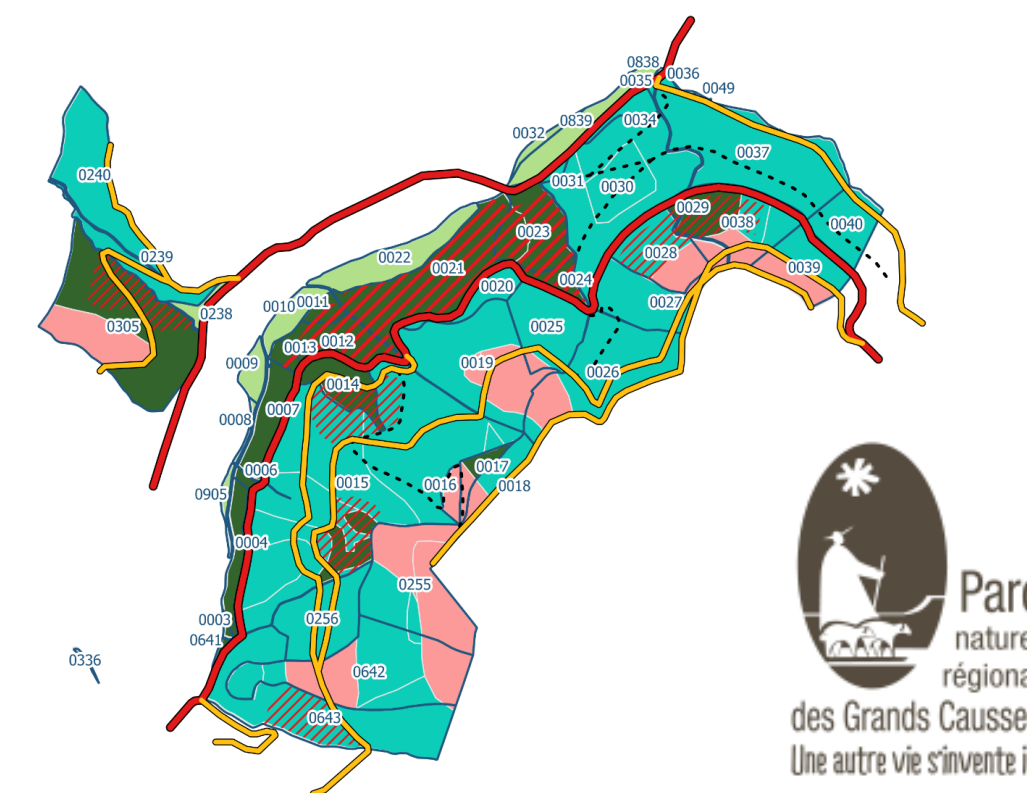
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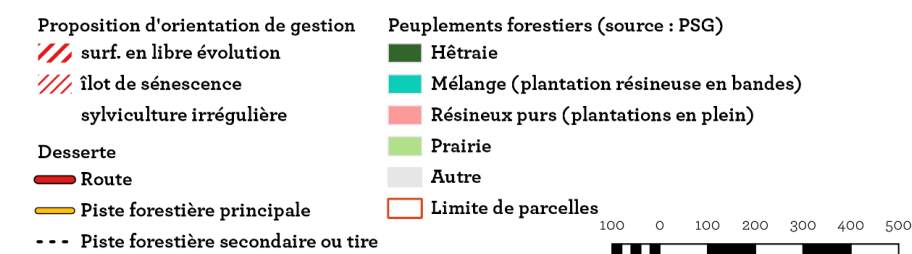
Example of **Forest of Sylvanes**

The « **real environmental obligation** » (ORE) established for 99 ans between Sylvanes municipality, Conservatoire d'espaces naturels d'Occitanie and Natural Régional Parc of « Grands Causses » guarantees:

- **20 ha** of beech forest in **free evolution**
- Absence of clear-cutting practices
- Irregularization of Douglas-fir stands
- Preservation of all dead trees
- Preservation at least of **10 habitats trees /ha**



Forêt des Bains de Sylvanès
Orientations de gestion



Related to **Integrate forest management** principles

Which levers for forest preservation, the role of NGO:

Creating economic levers to support forest owners: the case of Payments for ecosystem services

Example of « **LABEL BAS CARBONE** » (Low carbon Label)

France's voluntary government climate certification framework that recognizes projects aimed at reducing emissions and sequestering carbon

With funding support of:



Soutiens du projet :



With committee member

FREE FOREST EVOLUTION METHOD

Membres du comité de pilotage :



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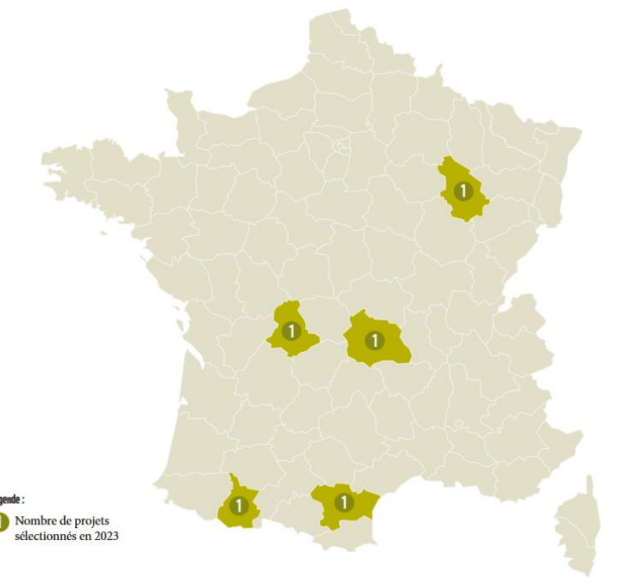
Example of « **NATURE IMPACT** »

More than 3 Millions € in 2023 with the objectives of 40 M€ over 10 years

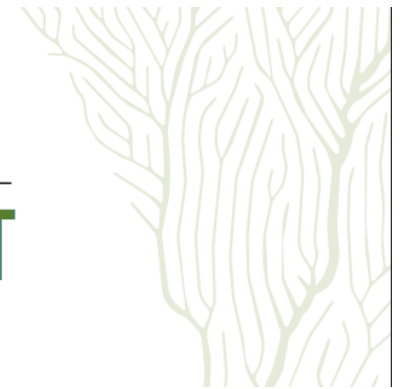
A framework of Payment for Ecosystem Services combining Biodiversity and Carbon

A first example in Pyrenees:

Bager d'Oloron forest: 370 000 euros of PES for the conservation and monitoring of 150 ha of old growth forest in 2023



CHARTRE FONDATRICE
INITIATIVE NATURE IMPACT
ENSEMBLE, MISONs SUR LE VIVANT



Dicrane vert (*Dicranum viride*)



Desman des Pyrénées



Thanks for your attention !



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